

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: **George et al.**

Serial No.: **09/717,818**

Filed: **November 21, 2000**

For: **Method and System for a Generic
Metadata-Based Mechanism to Migrate
Relational Data Between Databases**

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§

Group Art Unit: **2168**

Examiner: **Robinson, Greta Lee**

Attorney Docket No.: **AUS9-2000-0552-US1**

35525

PATENT TRADEMARK OFFICE
CUSTOMER NUMBER

RESPONSE TO NOTICE OF NON-COMPLIANT APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

A Notice of Non-Compliant Appeal Brief was received by Applicant stating that "the appeal brief filed on August 23, 2004 is considered non-compliant because "the brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order". A copy of the Notice of Non-Compliant Appeal Brief is attached hereto.

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to IBM Corporation Deposit Account No. 09-0447.

In response to the Notification of Non-Compliant Appeal Brief dated August 19, 2005, please reconsider the holding of non-compliance.

REMARKS

In order to address the Examiner's concerns, a Supplemental Appeal Brief is submitted herewith. It is respectfully submitted that the Supplemental Appeal Brief filed herewith is in compliance with 37 C.F.R. § 41.37. Appellant respectfully requests that the Supplemental Appeal Brief be entered.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

Date: January 25, 2007

Respectfully submitted,

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------|---------------------|------------------|
| 09/717,818 | 11/21/2000 | Joseph Mulaveil George | AUS9-2000-0552-US1 | 2114 |

7590 08/19/2005
Joseph R Burwell
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EXAMINER

ART UNIT

PAPER NUMBER

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|--|--------------------------------------|--------------------------------------|--|
| Notification of Non-Compliant Appeal Brief (37 CFR 41.37) | Application No. 09/717,818 | Applicant(s) GEORGE ET AL. | |
| | Examiner Greta L. Robinson | Art Unit 2167 | |

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The Appeal Brief filed on 11 January 2005 is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file a complete new brief in compliance with 37 CFR 41.37 within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer. **EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.138.**

1. ☒ The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.
2. ☐ The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed or confirmed, withdrawn, objected to, canceled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).
3. ☐ At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).
4. ☐ (a) The brief does not contain a concise explanation of the subject matter defined in each of the Independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each Independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).
5. ☐ The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi)).
6. ☐ The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).
7. ☐ The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).
8. ☐ The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner and relied upon by appellant in the appeal, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).
9. ☐ The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).
10. ☐ Other (including any explanation in support of the above items):


 GRETA L. ROBINSON
 PRIMARY EXAMINER

Greta Robinson
 Primary Examiner
 June 22, 2005

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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APPEAL BRIEF (37 C.F.R. 41.37)

This brief is in furtherance of the Notice of Appeal filed on May 21, 2004 and the Appeal Brief filed on August 23, 2004, which appealed from the decision of the Examiner dated January 16, 2004 rejecting claims 1-18.

No fees are believed to be required. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to IBM Corporation Deposit Account No. 09-0447.

REAL PARTY IN INTEREST

The real party in interest in this appeal is the following party: International Business Machines Corporation of Armonk, New York.

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-18

B. STATUS OF ALL THE CLAIMS IN APPLICATION

1. Claims canceled: None
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 1-18
4. Claims allowed: None
5. Claims rejected: 1-18
6. Claims objected to: None

C. CLAIMS ON APPEAL

The claims on appeal are: 1-18

STATUS OF AMENDMENTS

No amendments were submitted after the final office action of January 16, 2004.

SUMMARY OF CLAIMED SUBJECT MATTER

A. CLAIM 1 - INDEPENDENT

The subject matter of claim 1 is directed to a method for migrating data between a first database and a second database. The method includes determining a set of dependencies among a plurality of tables in the first database (Specification, p. 16, ll. 8-11, p. 18, l. 30 – p. 19, l. 3; Figure 5B, ref. num. 552); retrieving metadata from the first database, wherein the metadata includes definitions for tables in the first database (Specification, p. 16, l. 25 – p. 17, l. 1, p. 18, ll. 27-30; Figure 5B, ref. num 550); reading data from tables in the first database using a plurality of read operations, wherein the read operations are structured in accordance with the retrieved metadata, and wherein the read operations are in an order indicated by the determined set of dependencies (Specification, p. 17, ll. 12-15, 18-28, p. 19, ll. 3-6; Figure 5B, ref. num. 554); and writing data to the second database using a plurality of write operations, wherein the write operations are in an order indicated by the determined set of dependencies (Specification, p. 19, ll. 15-19, p. 20, ll. 10-11; Figure 5B, ref. num. 560).

B. CLAIM 7 - INDEPENDENT

The subject matter of claim 7 is directed to an apparatus for migrating data between a first database and a second database. The apparatus includes determining means (Specification, p. 15, ll. 14-26, Figure 5A) for determining a set of dependencies among a plurality of tables in the first database (Specification, p. 16, ll. 8-11, p. 18, l. 30 – p. 19, l. 3; Figure 5B, ref. num. 552); retrieving means (Specification, p. 15, ll. 14-26, Figure 5A) for retrieving metadata from the first database, wherein the metadata includes definitions for tables in the first database (Specification, p. 16, l. 25 – p. 17, l. 1, p. 18, ll. 27-30; Figure 5B, ref. num 550); reading means (Specification, p. 15, ll. 14-26, Figure 5A) for reading data from tables in the first database using a plurality of read operations, wherein the read operations are structured in accordance with the retrieved metadata, and wherein the read operations are in an order indicated by the determined set of dependencies (Specification, p. 17, ll. 12-15, 18-28, p. 19, ll. 3-6; Figure 5B, ref. num. 554); and writing means (Specification, p. 15, ll. 14-26, Figure 5A) for writing data to the second database using a plurality of write operations, wherein the write operations are in an order indicated by the

determined set of dependencies (Specification, p. 19, ll. 15-19, p. 20, ll. 10-11; Figure 5B, ref. num. 560).

C. CLAIM 8 - DEPENDENT

The subject matter of claim 8 is directed to the apparatus of claim 7 for migrating data between a first database and a second database. The apparatus further includes storing means (Specification, p. 15, ll. 14-26, Figure 5A) for storing the determined set of dependencies using markup language to identify table dependencies (Specification, p. 25, ll. 3-9; Figure 6D).

D. CLAIM 9 - DEPENDENT

The subject matter of claim 9 is directed to the apparatus of claim 7 for migrating data between a first database and a second database. The apparatus further includes a second storing means (Specification, p. 15, ll. 14-26, Figure 5A) for storing the retrieved metadata using markup language to identify the retrieved metadata (Specification, p. 21, ll. 13-18; Figure 6A).

D. CLAIM 10 - DEPENDENT

The subject matter of claim 10 is directed to the apparatus of claim 7 for migrating data between a first database and a second database. The apparatus further includes a performing means (Specification, p. 15, ll. 14-26, Figure 5A) for performing a predetermined modification operation on the data read from the tables in the first database prior to a write operation to the second database (Specification, p. 20, ll. 7-10; Figure 5B, ref. num. 558).

E. CLAIM 11 - DEPENDENT

The subject matter of claim 11 is directed to the apparatus of claim 10 for migrating data between a first database and a second database. The apparatus further includes a third storing means (Specification, p. 15, ll. 14-26, Figure 5A) for storing the predetermined modification operation using markup language to identify the predetermined modification operation (Specification, p. 22, ll. 4-6; Figure 6B).

F. CLAIM 13 - INDEPENDENT

The subject matter of claim 13 is directed to a computer program product in a computer readable medium for use in a data processing system for migrating data between a first database and a second database. The computer program product includes instructions for determining a set of dependencies among a plurality of tables in the first database (Specification, p. 16, ll. 8-11, p. 18, l. 30 – p. 19, l. 3; Figure 5B, ref. num. 552); instructions for retrieving metadata from the first database, wherein the metadata includes definitions for tables in the first database (Specification, p. 16, l. 25 – p. 17, l. 1, p. 18, ll. 27-30; Figure 5B, ref. num 550); instructions for reading data from tables in the first database using a plurality of read operations, wherein the read operations are structured in accordance with the retrieved metadata, and wherein the read operations are in an order indicated by the determined set of dependencies (Specification, p. 17, ll. 12-15, 18-28, p. 19, ll. 3-6; Figure 5B, ref. num. 554); and instructions for writing data to the second database using a plurality of write operations, wherein the write operations are in an order indicated by the determined set of dependencies (Specification, p. 19, ll. 15-19, p. 20, ll. 10-11; Figure 5B, ref. num. 560).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to review on appeal are as follows:

1. Whether claims 1-18 are unpatentable under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.
2. Whether claims 1-18 are unpatentable under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

ARGUMENT

A. GROUND OF REJECTION 1 (Claims 1-18)

Quoting the entire rejection from the Final Office Action, the rejection states:

4. Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, has possession of the claimed invention. Regarding the limitation "first database" and "second database" these terms are not used in the disclosure nor the drawings note figure 5A. In the disclosure Applicant refers to a source database and a target database see page 15. Also, Applicant has not defined the limitation "set of dependencies". Applicant refers to the dependencies among the tables at page 18 line 31 through page 19 line 7; but does not appear to refer to a set of dependencies or define what is meant by the term. The disclosure does not appear to describe how are the set of dependencies determined?

Final Office Action dated January 16, 2004, pp. 2-3.

With respect to the objection to using the terms "first database" and "second database" in the claims whereas the specification uses the terms "source database" and "target database", Appellants note that the adjectives "first" and "second" are common adjectives in the English language that generically distinguish one entity from another entity. Appellants have merely replaced the adjectives "source" and "target" with the generic, broader adjectives of "first" and "second". Appellants argue that claim interpretation does not require the artificial ignorance of common language skills and that a patent practitioner may, to some degree, rely upon common knowledge and usage of language.

In addition, Appellants assert that the terms are commonly used by patent practitioners. Appellants have not used the terms in an illogical manner; on the other hand, Appellants assert that the Examiner's argument defies common logic. Moreover, the argument in the rejection is self-refuting; the fact that the rejection recognizes that the terms "first database" and "second database" in the claims correspond to the terms "source database" and "target database" in the specification refutes the argument in the rejection. More importantly, Appellants assert that one having ordinary skill in the art would understand the broader terminology. Thus, Appellants assert that the claims adhere to the written description requirements of 35 U.S.C. § 112, first

paragraph, because Appellants have reasonably conveyed the claimed invention through the written description to one having ordinary skill in the art.

With respect to the objection to the use of the term “set of dependencies” whereas the specification uses the term “dependencies”, Appellants note that the generic phrase “set of” is a common English phrase that refers to a group or an association of one or more generic entities. Thus, the phrase “a set of dependencies” would be commonly interpreted by anyone as meaning “a plurality of dependencies”, “a group of one or more dependencies”, or “an association of one or more dependencies”. Moreover, the argument in the rejection is self-refuting; the fact that the rejection recognizes that the phrase “set of dependencies” in the claims corresponds to the term “dependencies” in the specification refutes the argument in the rejection. Given that the phrase “set of” is not a technical term and that Appellants have not used the phrase in a manner against common usage, Appellants assert that one having ordinary skill in the art would easily comprehend the phrase “set of” and would apply the common interpretation of the phrase. Thus, Appellants assert that the claims adhere to the written description requirements of 35 U.S.C. § 112, first paragraph, because Appellants have reasonably conveyed the claimed invention through the written description to one having ordinary skill in the art. Given that the basis for the rejections under 35 U.S.C. § 112, first paragraph, is unfounded, Appellants request that the rejection should not be upheld on appeal.

B. GROUND OF REJECTION 2 (Claims 1-18)

Quoting the entire rejection from the Final Office Action, the rejection states:

6. Claims 1-18 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-18 are rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the migration process implemented by database migratory 510 figure 5A.

Final Office Action dated January 16, 2004, p. 3.

A portion of the rejection from the first Office Action was deleted in the Final Office Action, but the deleted portion helps to illustrate the illogical argument in the rejection:

Regarding claims 1, 7, and 13, the following limitation in the preamble is vague with respect to the elements in the body of the claim: “migrating data”. Note Applicants refer to migrating data in the preamble, but does not describe migrating steps within the body of the claim.

Office Action dated July 16, 2003, p. 4.

Appellants note that the phrase “migrating data” is common within the art for the concept of moving data that is stored in one location to another location. More importantly, the act of migrating data is not omitted in the claims because the act of migrating data is described over multiple elements within the claims of the present application. For example, the third element of independent claim 1 reads data from a first database while the fourth element of claim 1 writes data to a second database, thereby moving, i.e. migrating, data from one database to another database. Appellants assert that the claim language in the present application is sufficient to claim the process of migrating data and that the argument in the rejection is illogical.

Furthermore, Appellants find the rejection to be arbitrarily asserted against the present application. To support this conclusion, Appellants provide an example within an issued patent that illustrates that the claim language of the present patent application is similar to issued claims. Appellants did a quick patent search October 8, 2003 and found the following patent: *Abrams, Method and System for Migrating Data*, U.S. Patent No. 6,151,608 (issued, November 21, 2000) (hereinafter “*Abrams*”) by the same Examiner that has rejected the claims in the present patent application. Independent claim 1 of *Abrams* states:

1. An automated computer-implemented method for migrating source data from at least one source to at least one destination table of a database having a schema without a user having to write computer code, the method comprising the steps of:
 - defining patterns which describe format and content of the source data;
 - applying the patterns to the source data to create transformed data;
 - associating migration rules based on the schema with the patterns to generate a set of instructions that define migration paths; and
 - loading the transformed data in a sequence into the at least one destination table based on the set of instructions, the at least one destination table having a defined format and destination fields, wherein the step of loading is automatically sequenced based on the migration rules so that referential integrity is maintained.

Hence, *Abrams* also contains a claim preamble for a “method for migrating” data but does not use the verb “migrating” within the body of the claim, notwithstanding the fact that *Abrams* uses the term “migration rules” within the body of the claim. If the present patent application omits essential elements of the migration process as asserted by the rejection, then *Abrams* also omits essential elements of the migration process as is argued in the 35 U.S.C. § 112, second paragraph, rejection against the claims of the present patent application by the same Examiner that examined and issued the claims in *Abrams*; if so, then the Examiner should never have issued the claims in *Abrams*. Appellants assert that the claim language in the present patent application follows the same logical pattern as the issued claims in *Abrams*. More importantly, though, as noted above, Appellant asserts that the claim language in the present application is sufficient to claim the process of migrating data, and Appellant requests that the rejection should not be upheld on appeal.

C. CONCLUSION

In view of the above arguments, it is respectfully urged that the rejection of the claims should not be sustained.

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CLAIMS APPENDIX

The text of the claims involved in the appeal are:

1. A method for migrating data between a first database and a second database, the method comprising the steps of:

determining a set of dependencies among a plurality of tables in the first database;

retrieving metadata from the first database, wherein the metadata includes definitions for tables in the first database;

reading data from tables in the first database using a plurality of read operations, wherein the read operations are structured in accordance with the retrieved metadata, and wherein the read operations are in an order indicated by the determined set of dependencies; and

writing data to the second database using a plurality of write operations, wherein the write operations are in an order indicated by the determined set of dependencies.

2. The method of claim 1 further comprising:

storing the determined set of dependencies using markup language to identify table dependencies.

3. The method of claim 1 further comprising:

storing the retrieved metadata using markup language to identify the retrieved metadata.

4. The method of claim 1 further comprising:
performing a predetermined modification operation on the data read from the tables in the first database prior to a write operation to the second database.
5. The method of claim 4 further comprising:
storing the predetermined modification operation using markup language to identify the predetermined modification operation.
6. The method of claim 1 wherein the first database and the second database have dissimilar schemas.
7. An apparatus for migrating data between a first database and a second database, the apparatus comprising:
determining means for determining a set of dependencies among a plurality of tables in the first database;
retrieving means for retrieving metadata from the first database, wherein the metadata includes definitions for tables in the first database;
reading means for reading data from tables in the first database using a plurality of read operations, wherein the read operations are structured in accordance with the retrieved metadata, and wherein the read operations are in an order indicated by the determined set of dependencies;
and

writing means for writing data to the second database using a plurality of write operations, wherein the write operations are in an order indicated by the determined set of dependencies.

8. The apparatus of claim 7 further comprising:

first storing means for storing the determined set of dependencies using markup language to identify table dependencies.

9. The apparatus of claim 7 further comprising:

second storing means for storing the retrieved metadata using markup language to identify the retrieved metadata.

10. The apparatus of claim 7 further comprising:

performing means for performing a predetermined modification operation on the data read from the tables in the first database prior to a write operation to the second database.

11. The apparatus of claim 10 further comprising:

third storing means for storing the predetermined modification operation using markup language to identify the predetermined modification operation.

12. The apparatus of claim 7 wherein the first database and the second database have dissimilar schemas.

13. A computer program product in a computer readable medium for use in a data processing system for migrating data between a first database and a second database, the computer program product comprising:

instructions for determining a set of dependencies among a plurality of tables in the first database;

instructions for retrieving metadata from the first database, wherein the metadata includes definitions for tables in the first database;

instructions for reading data from tables in the first database using a plurality of read operations, wherein the read operations are structured in accordance with the retrieved metadata, and wherein the read operations are in an order indicated by the determined set of dependencies; and

instructions for writing data to the second database using a plurality of write operations, wherein the write operations are in an order indicated by the determined set of dependencies.

14. The computer program product of claim 13 further comprising:

instructions for storing the determined set of dependencies using markup language to identify table dependencies.

15. The computer program product of claim 13 further comprising:

instructions for storing the retrieved metadata using markup language to identify the retrieved metadata.

16. The computer program product of claim 13 further comprising:
instructions for performing a predetermined modification operation on the data read from the tables in the first database prior to a write operation to the second database.
17. The computer program product of claim 16 further comprising:
instructions for storing the predetermined modification operation using markup language to identify the predetermined modification operation.
18. The computer program product of claim 13 wherein the first database and the second database have dissimilar schemas.

EVIDENCE APPENDIX

There is no evidence to be presented.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.